Small NEPA Soils Report

Project Name: Badger Shaft #2 Abandoned Mine

Ranger District: Red River

General Project Description:

Badger Adit #2 is adjacent to USFS Road 311. The location of this shaft is 45° 39' 24"N latitude and 115° 31' 30"W longitude. This site is simply an old mine shaft that was caved at the top and filled to near the top with an earth and rock debris plug. The pit will be backfilled and surface reclaimed.

The following guidance for soil management includes Forest, Regional and National level Standards, and indicates how the proposal is consistent with each standard.

The Nez Perce National Forest Plan provides guidance for minerals management, "Mineral resource activities will be administered under the appropriate laws and regulations to insure protection of surface resources….Reclamation of disturbed areas to a productive condition will be required in all cases."

The Plan provides guidance for soil management, which states "Soil productivity will be maintained and soil erosion will be minimized through the application of best management practices".

The Clearwater National Forest Plan provides guidance for minerals management, "Provide for access to and the orderly exploration, development, and production of minerals and energy resources, while meeting Forest Plan direction for other resources."

The Plan provides guidance for soil management, to "[e]nsure that soil productivity is maintained and no irreversible damage occurs to soil and water resources from Forest management activities".

In accordance with PACFISH and INFISH for Key Watersheds, the area from the edges of the stream channel, wetland, landslide, or landslide-prone area to a distance equal to the height of one site potential tree, or 100 feet slope distance, whichever is greatest is determined to be an RHCA. Management direction includes "Best management practices shall be applied to all land-disturbing activities, including prevention of soil erosion during land management activities."

Northern Region Soil Quality Standards were developed "[t]o meet direction in the National Forest Management Act of 1976 and other legal mandates [and t]o manage National Forest System lands under ecosystem management principles without permanent impairment of land productivity and to maintain or improve soil quality."

FSM 2532 directs the use of best management practices (BMPs) to be promoted and applied to all management activities as the method for control of nonpoint sources of water pollution to achieve established State or national water quality goals. National BMPs can be found in National Best Management Practices for Water Quality Management on National Forest System Lands (USDA FS Publication FS990a). State BMPs can be found in the Best Management Practices for Mining in Idaho (Idaho Department of Lands 1992).

Forest Plan Consistency

Nez Perce NF Forest Plan Standards	Consistency (only projects on NPNF)
Evaluate the potential for soil displacement, compaction, puddling, mass wasting, and surface soil erosion for all ground-disturbing activities.	Soil and Water BMPs will be used for any ground disturbing activities. Soil and Water BMPs can be found in the National Best Management Practices for Water Quality Management on National Forest System Lands (USDA FS Publication FS990a) and Best Management Practices for Mining in Idaho (Idaho Department of Lands 1992)
A minimum of 80 percent of an activity area shall not be detrimentally compacted, displaced, or puddled upon completion of activities. This direction does not apply to permanent recreation facilities and other permanent facilities such as system roads.	"Mitigation Measures for Placer Exploration" lists Mining BMPs for all surface disturbing activities, reclamation, and abandonment.
Maintain sufficient ground cover to minimize rill erosion and sloughing on road cut and fill slopes and sheet erosion on other activity areas.	Soil and Water BMPs will be used for any ground disturbing activities.

Clearwater NF Forest Plan Standards	Consistency (only projects on CWNF)
Manage activities on lands with ash caps such that bulk densities on at least 85 percent of the area remain at or below 0.9 gram/cubic centimeter.	NA
Design resource management activities to maintain soil productivity and minimize erosion.	NA
The minimum coordinating requirements for projects on land types with high or very high mass stability or parent material erosion hazard ratings are: **(1) The field verification of the mapped unit and predicted hazard rating.** **(2) Review road locations using a team consisting of a engineering geologist, hydrologist, soil scientist, and a silviculturist.** **Assess concerns and possible mitigation measures to determine if a geotechnical investigation is needed.** **(3) After the "P" line has been located, stake mitigating road designs, using the original ID team members and road**	NA

designer.	
Review silvicultural prescriptions and unit locations on land type 50 (old slumps) to determine whether vegetation removal (timber harvesting) may contribute to slope instability.	NA
Give special attention to compacted glacial tills in the Powell area. When projects are proposed in areas where compacted tills are known to occur or suspected to occur, an intensive soil map will be prepared and ground verified. Mitigation measures should be applied that will assure that water tables will not be raised or that subsurface water will not be converted to surface flows. Measures will also be applied to assure that soil erosion and resulting lowering of soil productivity will not occur.	NA

PACFISH/INFISH - Landslide Prone/Wetlands	**Consistency (all projects)**
If the project affects landslide prone lands or wetlands, how are PACFISH/INFISH requirements being met by the project?	The project will not affect landslide prone lands or wetlands.

Regional Soil Quality Standards	**Consistency (all projects)**
Do the Regional Standards apply (why or why not) and if so how are they being met by the project? **Address DSD and CWD.**	Soil quality standards apply to lands where vegetation and water resource management are the principal objectives. The standards do not apply to intensively developed sites such as mines, quarries, etc. Disturbance will occur, but must be confined to the work area. Standards and guidelines apply to the off-site impacts and will be met with Soil and Water BMPs. Lands should be reclaimed to meet soil productivity goals of the site.

Additional Notes and Analysis:

The project area is mapped as Soil Map Unit 32A65—Andic Cryochrepts, gently sloping mountain slopes. Within the project area, typically the soil has a silt loam surface layer about 13 inches thick, a fine sandy loam subsoil about 5 inches thick, and a very gravelly loamy coarse sand substratum to a depth of 60 inches. Quartzite or schist bedrock may occur at depths of 40 to 60 inches. The volcanic ash mantle ranges from 7 to 14 inches thick within the project area.

The soil condition function rating of the disturbed soils at this site is “Impaired” for all soil condition functions.

The undisturbed soils around the mine shaft and pit have a soil condition function rating of “Functioning Properly”. This site burned in the 2012 McGuire Fire. No hydrophobic conditions exist and the surface is undisturbed.

/S/ Steve VanFossen 6/11/2014

Soil Scientist Date

/S/ xx/xx/xxxx

Forest Soil Scientist Date